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Telephone Ext:

OFFICE MEMORANDUM

TO : Distribution

DATE: April 4, 1980

FROM : E. F. Homuth EFH

SUBJECT : MICROSEISMIC ACTIVITY RECORDED DURING EXPERIMENT 217

Fred

SYMBOL : G-7

MAIL STOP: 676

Recently we recorded two microseismic events that were within 1.0 km of TA-57. They occurred on April 1 at 04:32 GMT and 14:26 GMT. They had a local magnitude of approximately -3 and were recorded on only two stations (Lake Fork Canyon deep well station and close in station Q-3).

Since only two stations recorded these events, it is not possible to set an accurate location. The data did show S-P times that indicate that one of the events (14:26 Z) had a depth ranging between 1.5 km and 1.8 km (4900 ft to 5900 ft). The other event (04:32 Z) appears to be shallower with a probable depth ranging between 0.6 km and 1.0 km (2000 ft to 3300 ft). Both events appear to be very close to the GT-2, EE-1, and EE-2 hole complex (but at some depth as stated above).

These microseismic events are the first such signals observed during Experiment 217 (a total of seven microseismic events with local magnitudes ranging from -2.5 to -1.5 were seen during the high pressure phase of Experiment 215 - see previous Homuth memo dated 11/19/79).

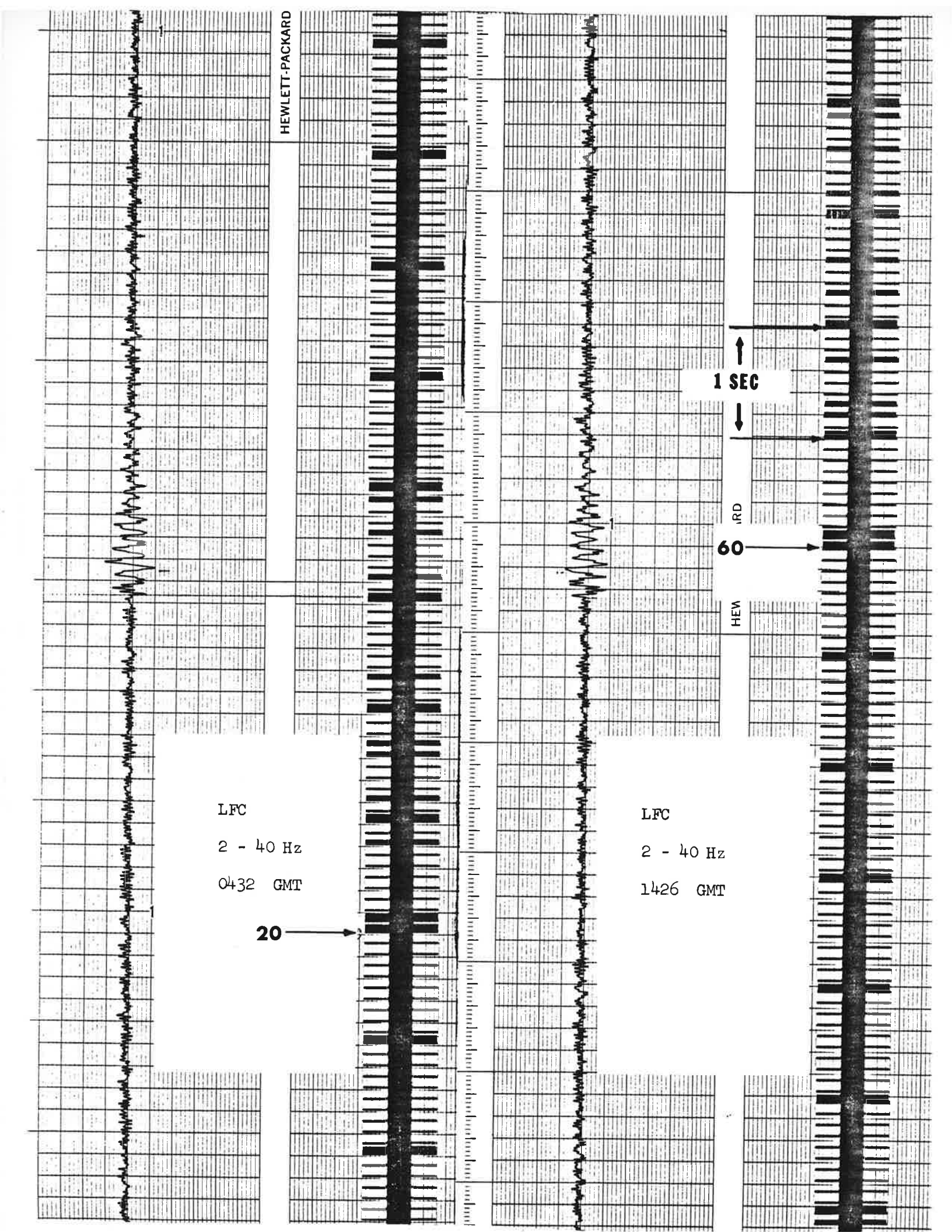
Although microseismic signals of this energy pose no threat to the continuation of Experiment 217, they do indicate that we will surely detect any seismic emissions greater than local magnitude -2.5 within three kilometers of TA-57. This is an important capability in assessing any seismicity associated with HDR experiments and operations at TA-57 or at any future HDR sites.

For those of you with a seismological inclination, I have attached a copy of the playbacks of the two microseismic signals observed on 4/1/80. The signal to noise ratio is not the greatest, but even an untrained observer could identify the signals.

EH/nb

Enc. a/s

xc: Distribution


HEWLETT-PACKARD
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60
20
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2 - 40 Hz
0432 GMT
LFC
2 - 40 Hz
1426 GMT